IN THE CLAIMS:

Cancel claims 165-212 and replace them with **new claims 213-265** as follows:

Claims 1-212 **(canceled)**

213. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,

wherein the air gap, in section transverse to the direction of movement, comprises at least two neighboring uniform and/or nonuniform air gap sections, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform and their magnetic poles are magnetized preferably vertically to the boundary surface in direction of the coil side and that with one of their air gap boundary surfaces belonging to the first body lie at an angle to one another at the joint bordering edge or corner edge arising in this way, and each coil side of the at least one air-core coil runs through the air gap with its air gap sections, with each edge changing its geometric form and thereby completing a bend or fold around the first body, and each coil side running essentially in the air gap, the individual air gap section is straight or curved, and every coil stokes across both pole surface during relative moving and straight and/or arc-shaped (curved) air gap sections are combined.

214. (New) A machine of magnetic induction with a bent air core coil between two magnetic bodies comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,

wherein the air gap, in section transverse to the direction of movement, comprises at least two neighboring uniform and/or nonuniform air gap sections, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform and their magnetic poles are magnetized preferably vertically to the boundary surface in direction of the coil side and that with one of their air gap boundary surfaces belonging to the first body lie at an angle to one another at the joint bordering edge or corner edge arising in this way, and each coil side of the at least one air-core coil runs through the air gap with its air gap sections, with each edge changing its geometric form and thereby completing a bend or fold around the first body, and each coil side running essentially in the air gap, the individual air gap section is straight or curved, and every coil stokes across both pole surface during relative moving and straight and/or arc-shaped air gap sections are combined

and at least two neighboring air uniform and/or nonuniform gap sections, and the magnetic poles belong at least to different boundary surfaces of the air gap and the magnetic poles of the one air gap section, which belong to the boundary surface of the first body, lie with their

faces at a distance to the return path material of the abutting, neighboring boundary surface of the other air gap section, which comprises at least predominantly return path material, or at least two neighboring uniform and/or nonuniform air gap sections which contain, in their boundary surfaces which belong to the first body and abut one another, magnetic partial poles which, over the joint edge, form a joint continuous pole which is magnetized in direction of the coil sides orthogonally to its air gap boundary surface and are part of an uniform or nonuniform air gap.

215. (New) A machine of magnetic induction with a bent air core coil between two magnetic bodies, comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,
wherein the air gap, in section transverse to the direction of movement, comprises at least two neighboring uniform and/or nonuniform air gap sections, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform and their magnetic poles are magnetized preferably vertically to the boundary surface in direction of the coil side and that with one of their air gap boundary surfaces belonging to the first body lie at an angle to one another at the joint bordering edge or corner edge arising in this way, and each coil side of the at least one air-core coil runs through the air gap with its air gap sections, with

each edge changing its geometric form and thereby completing a bend or fold around the first body, and each coil side running essentially in the air gap, the individual air gap section is straight or curved, and every coil stokes across both pole surface during relative moving and straight and/or arc-shaped air gap sections are combined,
wherein the field device is located, at least in the form of at least two coaxial nested drum-shaped bodies at a distance from one another, on an axle or shaft, with each one first drum-shaped body located neighboring one second drum-shaped body and these, in section transverse to the direction of movement, each delimiting one air gap section, with two straight air gap sections or at least one straight and one curved air gap section or at least one curved air gap section forming the air gap, which approaches an axle or shaft in at least one region, with each coil side of the at least one air-core coil bent within at least one curved air gap section and/or changing its shape on at least one bordering edge or corner edge, at which each two neighboring air gap sections abut at their boundary surfaces belonging to the first body, and/or on an outer edge of the first body and bending or folding around the first body and extending over the entire air gap approximately centrally between the first and second body and at approximately equal distances from them, and the magnetic poles, which delimit the air gap and each air gap section on at least one side, are preferably magnetized orthogonally to their air gap boundary surface, extend along the air gap in section transverse to the direction of movement, and alternate around the periphery, and the field device rotates relative to the at least one air-core coil and the first and second bodies of the field device preferably securely connected and moving preferably uniformly with one another.

216. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no

contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,

wherein the air gap, in section transverse to the direction of movement, comprises at least one curved uniform and/or nonuniform air gap section, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform, which is delimited by the inside of the first body and outside of the second body and in which at least one curved air gap section each coil side of the at least one air-core coil extends essentially along the full length of the curve, and the coil sides run through the air gap with its at least one air gap section.

217. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,

wherein the air gap, in section transverse to the direction of movement, comprises at least one

curved uniform and/or nonuniform air gap section, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform, which is delimited by the inside of the first body and outside of the second body and in which at least one curved air gap section each coil side of the at least one air-core coil extends essentially along the full length of the curve, and the coil sides run through the air gap with its at least one air gap section,

wherein the field device is located, at least in the form of at least two coaxial nested drum-shaped bodies at a distance from one another, on an axle or shaft, with each one first drum-shaped body located neighboring one second drum-shaped body and these, in section transverse to the direction of movement, each delimiting one air gap section, with two straight air gap sections or at least one straight and one curved air gap section or at least one curved air gap section forming the air gap, which approaches an axle or shaft in at least one region, with each coil side of the at least one air-core coil bent within at least one curved air gap section and/or changing its shape on at least one bordering edge or corner edge, at which each two neighboring air gap sections abut at their boundary surfaces belonging to the first body, and/or on an outer edge of the first body and bending or folding around the first body and extending over the entire air gap approximately centrally between the first and second body and at approximately equal distances from them, and the magnetic poles, which delimit the air gap and each air gap section on at least one side, are preferably magnetized orthogonally to their air gap boundary surface, extend along the air gap in section transverse to the direction of movement, and alternate around the periphery, and the field device rotates relative to the at least one air-core coil and the first and second bodies of the field device preferably securely connected and moving preferably uniformly with one another.

218. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which

either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,

wherein the air gap, in section transverse to the direction of movement, comprises at least two neighboring uniform and/or nonuniform air gap sections, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform and lying close to one another, whose inner boundary surfaces approach closely enough to each other on at least one side that they are connected by a short outer edge of the jointly delimited first body and/or whose boundary surfaces belonging to the first body abut at the bordering edge or corner edge of the first body, and each coil side of the at least one coil runs through the air gap with the air gap sections and thereby each coil side completes one or more bends and/or folds around the short outer edge and/or the bordering edge or corner edge of the first body, and each coil side essentially runs in the air gap and the folded region of the coil is penetrated at least to a large extent by the field, in that in this part of the folded region at least one uniform and/or nonuniform (irregular) air gap section delimits the conductor with magnetic poles affixed to at least one side, and/or the short outer edge forms a pole face having the same polarity with at least one boundary surface of the air gap sections pertaining to the first body, which is occupied with magnetic poles which are magnetized vertically to the boundary surface in the direction of the coils sides and/or in section transverse to the direction of movement, at least one second body in the folded region in the region of the bordering edge or corner edge or outer edge at least partially follows a curved coil trace at a uniform distance, and/or and at least two neighboring air uniform and/or nonuniform gap sections, and the magnetic poles belong at least to different boundary surfaces of the air gap and the magnetic poles of the one air gap section, which belong to the boundary surface of the first body, lie with their faces at a distance to the return path material of the abutting, neighboring boundary surface of the other air gap section, which comprises at least predominantly return path material, and/or at least two neighboring uniform and/or nonuniform air gap sections which contain, in their boundary

surfaces which belong to the first body and abut one another, magnetic partial poles which, out over the joint edge or with an outer edge, form a joint continuous pole which is magnetized in direction of the coil sides orthogonally to its air gap boundary surface and are part of an uniform or nonuniform air gap, and/or wherein at least one second body is connected via its edges lying in the direction of movement with a return path flat band which delimits the air gap on one side in the folded region in the region of an bordering edge or corner edge and/or short outer edge and is a part of at least predominantly nonuniform air gap, and/or wherein the return path flat band carries, on the side toward the air gap, magnetic poles which extend transverse to the direction of movement, alternate in the direction of movement, and are magnetized in the direction of the first body, in the direction of the bordering edge or corner edge and/or short outer edge and is a part of at least predominantly nonuniform air gap.

219. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,
wherein the air gap, in section transverse to the direction of movement, comprises at least two neighboring uniform and/or nonuniform air gap sections, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform, lying close and

parallel to one another, whose inner boundary surfaces approach closely enough to each other on at least one side that they are connected by a short outer edge of the jointly delimited first body, and each coil side of the at least one coil runs through the air gap with the air gap sections and thereby each coil side completes one or more bends and/or folds around the short outer edge of the first body , and each coil side essentially runs in the air gap and all coil side sections of coil side within the respective air gap section are movable with the same speed relative to the field device.

220. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,
wherein, in section transverse to the direction of movement, comprises at least
two straight air gap sections or at least one straight and one curved air gap section or at least one curved air gap section forming the air gap,
and each coil side of the at least one air-core coil runs through the air gap with its uniform and/or nonuniform air gap sections, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform,
with each coil side of the at least one air-core coil bent within at least one curved air gap

section and/or changing its shape on at least one edge, at which each two neighbouring air gap sections abut at their boundary surfaces belonging to the first body, and/or on an short outer edge of the first body and bending or folding around the first body and extending over the entire air gap approximately centrally between the first and second body and at approximately equal distances from them, and the magnetic poles, which delimit the air gap and each air gap section on at least one side, are magnetized orthogonally to their air gap boundary surface, extend along the air gap in section transverse to the direction of movement, and alternate around the periphery, and the field device moves relative to the at least one air-core coil, with the first and second bodies of the field device securely connected and moving uniformly with one another and the winding consists of at least one alternating nonferrous current winding.

221. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,
wherein, in section transverse to the direction of movement, comprises at least
two straight air gap sections or at least one straight and one curved air gap section or at least one curved air gap section forming the air gap,
and each coil side of the at least one air-core coil runs through the air gap with its uniform

and/or nonuniform air gap sections, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform,
with each coil side of the at least one air-core coil bent within at least one curved air gap section and/or changing its shape on at least one edge, at which each two neighbouring air gap sections abut at their boundary surfaces belonging to the first body, and/or on an short outer edge of the first body and bending or folding around the first body and extending over the entire air gap approximately centrally between the first and second body and at approximately equal distances from them, and the movement is a rotating one around an axis or shaft and the magnetic poles, which delimit the air gap and each air gap section on at least one side, are magnetized orthogonally to their air gap boundary surface, extend along the air gap in section transverse to the direction of movement, and alternate around the periphery, and the field device rotates relative to the at least one air-core coil, with the first and second bodies of the field device securely connected and moving uniformly with one another and the nonferrous winding consists of air coil overlapping each other with one or several winding each, which run generally V-shaped from the girth area in direction of the axis or shaft as single conductor or conductor bundle.

222. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air

gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,
wherein, in section transverse to the direction of movement, comprises at least
two straight air gap sections or at least one straight and one curved air gap section or at least one curved air gap section forming the air gap,
and each coil side of the at least one air-core coil runs through the air gap with its uniform and/or nonuniform air gap sections, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform,
with each coil side of the at least one air-core coil bent within at least one curved air gap section and/or changing its shape on at least one edge, at which each two neighbouring air gap sections abut at their boundary surfaces belonging to the first body, and/or on an short outer edge of the first body and bending or folding around the first body and extending over the entire air gap approximately centrally between the first and second body and at approximately equal distances from them, and the movement is a rotating one around an axis or shaft, and the magnetic poles, which delimit the air gap and each air gap section on at least one side, are magnetized orthogonally to their air gap boundary surface, extend along the air gap in section transverse to the direction of movement, and alternate around the periphery, and the field device rotates relative to the at least one air-core coil, with the first and second bodies of the field device securely connected and moving uniformly with one another and the winding is a nonferrous direct current winding with air coils 3 which one winding each, which runs generally V-shaped from the periphery region in direction of the axis or shaft, the air coils overlapping each other and twisted relative to another in the direction of movement complement one another to a two-layered direct current winding or a multiple of that in the whole area of axis approximation.

223. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of

movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,

wherein the air gap, in section transverse to the direction of movement, comprises at least two neighboring uniform and/or nonuniform air gap sections, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform and their magnetic poles are magnetized preferably vertically to the boundary surface in direction of the coil side and that with one of their air gap boundary surfaces belonging to the first body lie at an angle to one another at the joint bordering edge or corner edge arising in this way, and each coil side of the at least one air-core coil runs through the air gap with its air gap sections, with each edge changing its geometric form and thereby completing a bend or fold around the first body, and each coil side running essentially in the air gap, the individual air gap section is straight or curved, and every coil stokes across both pole surface during relative moving and straight and/or arc-shaped air gap sections are combined,

and in section transverse to the direction of movement, the air gap is assembled from three air gap sections, with two straight air gap sections lying in parallel connected through a third air gap section, which is either straight and lies at a 90° angle to each of them,

and in section transverse to the direction of movement, the air gap comprises at least three air gap sections, with two straight air gap sections lying in parallel connected by a straight third air gap section, and magnetic poles belong to at least one of the two parallel boundary surfaces of the parallel air gap sections of the first body and are affixed to at least one of the sides of a slot-shaped return path body belonging to the first body and the boundary surface of the air gap section, which connects the two bordering edge or corner edges, in which one boundary surface of the air gap section abuts one of each of the air gap sections, comprises return path material and forms a flat return path of the first body, which is a return path flat

band, which lies at a distance to the faces of the magnetic poles and is connected with the return path body approximately in the middle or on one bordering edge or corner edge, and an air gap boundary surface of the air gap section, to which magnetic poles belong, lies opposite to the return path flat band.

224. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,
wherein the air gap, in section transverse to the direction of movement, comprises at least two neighboring uniform and/or nonuniform air gap sections, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform and their magnetic poles are magnetized preferably vertically to the boundary surface in direction of the coil side and that with one of their air gap boundary surfaces belonging to the first body lie at an angle to one another at the joint bordering edge or corner edge arising in this way, and each coil side of the at least one air-core coil runs through the air gap with its air gap sections, with each edge changing its geometric form and thereby completing a bend or fold around the first body, and each coil side running essentially in the air gap, the individual air gap section is

straight or curved, and every coil stokes across both pole surface during relative moving and straight and/or arc-shaped air gap sections are combined,
and in section transverse to direction of movement, the air gap comprises several abutting air gap sections, each two of which abut at an bordering edge or corner edge and/or an short outer edge, which are straight or curved, and through which each coil side of the at least one air-core coil runs, thereby completing at least one left bend and one right bend.

225. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 224, wherein thereby at least three straight air gap sections lie, in section transverse to the direction of movement, parallel to one another and each coil side of the at least one coil runs through the air gap with the air gap sections.

226. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 224, wherein the air gap, in section transverse to the direction of movement, comprises three straight air gap sections, with two air gap sections lying parallel to one another and running next to each other, and the third air gap section assuming an angle of 90° to them and each coil side of the at least one coil runs through the air gap with the air gap sections.

227. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 220 or 221, characterized in that the nonferrous winding consists of several alternating current windings, which together form a rotary current winding or a traveling wave winding.

228. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 219, wherein the at least two air gap sections, in section transverse to the direction of movement, lie parallel to one another, and their inner boundary surfaces delimit a uniformly narrow first body and
the inner boundary surfaces of the at least two air-core coil sections comprise at least predominantly return path material.

229. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 216, wherein the air gap, in section transverse to the direction of movement, comprises at least one curved air gap section, which is delimited by

the inside of the first body and on the outside by the second body, where the at least one curved air gap section is disposed adjacent to at least one other air gap section and whose boundary surfaces pertaining to the first body either converge at least on one side such that they are connected that they abut directly on the thus formed common bordering edge or corner edge and that in the at least one curved air gap section and each coil side of the at least one air-core coil extends essentially along the full length of the curve, and the coil sides run through the air gap with its air gap sections and essentially in the air gap.

230. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 213 or 216, wherein, in section transverse to the direction of movement, the at least one curved air gap section is an nonuniformly (irregular) curve.

231. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 230, wherein, in section transverse to the direction of movement, the irregular curved air gap section is elliptical.

232. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 213, 214, 215, 216, 217, 218, 220, 221, 222, 223, 224, 256 or 257, wherein the air-coil in the air gap, in section transverse to the direction of movement, is located at least with the conductor approximating an axis or shaft within the air gap with the air gap sections.

233. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 232, wherein the air-core coil is located completely within the air gap with the air gap sections.

234. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 214, wherein the air gap, in section transverse to the direction of movement, comprises at least two neighboring air gap sections, which, in section transverse to the direction of movement, are straight and lie at an angle of 90° to one another, whereby they intersect at one of their boundary surfaces, belonging to the first body, forming an corner edge of the first body.

235. **(New)** A machine of magnetic induction with a bent air core coil between two

magnetic bodies according to claim 213, wherein the air gap, in section transverse to the direction of movement, comprises at least two neighboring uniform air gap sections which abut one another at a boundary surface which belongs to the first body, forming the bordering edge or corner edge, with one air gap section straight and one air gap section circularly curved.

236. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 216, wherein, the air gap, in section transverse to the direction of movement, comprises at least two neighboring uniform air gap sections at least one of which is curved, abut with one of their boundary surfaces pertaining to the first body at an angle of 180° at the point of contact, thus forming a bordering edge, where the inside boundary surface of the first body and the outside boundary surface of the second body verge directly into each other and each coil side extends in the full air gap and in the area of the bordering edge it runs completely in the air gap.

237. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 213 or 214, wherein, in section transverse to the direction of movement, the air gap is assembled from three air gap sections, with two air gap sections connected through a third air gap section and each air gap section is straight or curved.

238. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 237, wherein, in section transverse to the direction of movement, the two air gap sections are straight and lying in parallel connected through a third air gap section, which is either straight and lies at a 90° angle to each of them and which is positioned parallel to an axis or shaft.

239. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 213, wherein the air gap, in section transverse to the direction of movement, comprises at least two neighboring air gap sections, with the boundary surfaces which abut at an bordering edge or corner edge comprising predominantly return path material and belonging to a narrow first body of uneven thickness which tapers from the area of the winding head or the connection point of the coil sides to the folding area of the coil continuously and the magnetic poles belonging to the air gap boundary surface of the second body.

240. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 213 or 237, wherein identified by an air gap which approximates an axis or shaft with its winding heads or connective conductors, with a sleeve shaft or sleeve axis being used, through which wire or coolant is conducted.

241. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 213 or 237, wherein the first and the second body are not securely, but rather magnetically, connected with one another.

242. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 219, wherein, the air gap, in section transverse to the direction of movement, comprises at least two neighboring uniform and/or nonuniform air gap sections which contain, in their boundary surfaces which belong to the first body and abut one another, magnetic partial poles which, out over the joint edge or with an outer edge, form a joint continuous pole which is magnetized in direction of the coil sides orthogonally to its air gap boundary surface and are part of an uniform or nonuniform air gap,

243. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 219, wherein the movement is linear.

244. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 219, wherein the movement of the field device and the at least one air-core coil is rotational relative to an axle or a shaft.

245. **(New)** A machine of magnetic induction with a Bent Air Core Coil Between Two Magnetic Bodies according to claim 218, 220, 221 or 222, wherein the field device is located, at least in the form of at least two coaxial nested drum-shaped bodies at a distance from one another, on an axle or shaft, with each one first drum-shaped body located neighboring one second drum-shaped body and these, in section transverse to the direction of movement, each delimiting one air gap section, with two straight air gap sections or at least one straight and one curved air gap section or at least one curved air gap section forming the air gap, which approaches an axle or shaft in at least one region, with each coil side of the at least one air-core coil bent within at least one curved air gap section and/or changing its shape on at least one bordering edge or corner edge, at which each two neighboring air gap sections

abut at their boundary surfaces belonging to the first body, and/or on an outer edge of the first body and bending or folding around the first body and extending over the entire air gap approximately centrally between the first and second body and at approximately equal distances from them, and the magnetic poles, which delimit the air gap and each air gap section on at least one side, are preferably magnetized orthogonally to their air gap boundary surface, extend along the air gap in section transverse to the direction of movement, and alternate around the periphery, and the field device rotates relative to the at least one air-core coil and the first and second bodies of the field device preferably securely connected and moving preferably uniformly with one another.

246. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 245, wherein the field device, at least in the shape of at least three coaxial disk-shaped bodies lying at intervals, each as a disk or disk ring, is located on an axle or shaft with each one disk-shaped body located neighboring one second disk-shaped body, and these, in section transverse to the direction of movement, each delimiting one air gap section, whose boundary surfaces belonging to the first body abut at the bordering edge or corner edge of the first body at an acute angle, and magnetic poles belong to the second disk-shaped body on the side toward the air gap which are magnetized orthogonally to the air gap, extend in the direction of the axle, and alternate around the periphery, and at least one air-core coil, each coil side of which changes its geometric form at the bordering edge or corner edge, and which is bent or folded around the first body, with this being a very thin disk-shaped body, at least in its peripheral region, with boundary surfaces which predominantly comprise return path material, and a thin return path disk of uneven thickness, and each coil side on both sides of the first disk-shaped body extending into the air gap sections, approximately in the middle between each two disk-shaped bodies and at equal distances from them, in the direction of the axle or shaft, and connected in its region nearest the axle with another coil side into an air-core coil, with the first and second disk-shaped bodies rotatable uniformly with one another and relative to the at least one air-core coil.

247. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 245, wherein the field device, at least in the shape of at least three coaxial disk-shaped bodies lying at intervals, each as a disk or disk ring, is located on an axle or shaft, with each one disk-shaped body located neighboring one second disk-

shaped body, and these, in section transverse to the direction of movement, each delimiting one air gap section, whose boundary surfaces belonging to the first body approach one another on at least one side closely enough that they are connected by a short outer edge and lie parallel to one another, and magnetic poles belong to the second disk-shaped body on the side toward the air gap which are magnetized orthogonally to the air gap, which extend in the direction of the axle, and which alternate around the periphery, and at least one air-core coil, each coil side of which changes its geometric form at the short outer edge, and which is bent or folded around the first body, with this being a very thin disk-shaped body, with this being, at least in the peripheral region, a very thin disk-shaped body with boundary surfaces predominantly comprising return path material, and being a preferably thin return path disk of thickness, with each coil side extending outward from there on both sides of the first disk-shaped body in the direction of the axle or shaft, into each of the air gap sections approximately centrally between each two disk-shaped bodies at equal distances from them and connected there with another coil side into an air-core coil, with the first and second disk-shaped bodies rotatable preferably uniformly with one another and relative to the at least one air-core coil.

248. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 247, wherein the at least two air gap sections, in section transverse to the direction of movement, lie parallel to one another, and their inner boundary surfaces delimit a uniformly narrow first body. and
the inner boundary surfaces of the at least two air-core coil sections comprise at least predominantly return path material.

249. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 245, wherein the field device, at least in the shape of at least three coaxial disk-shaped bodies lying at intervals, each as a disk or disk ring, is located on an axle or shaft, with each one disk-shaped body located neighboring one second disk-shaped body, and these, in section transverse to the direction of movement, each delimiting one air gap section, which each run on one side of the first disk-shaped body in the direction of the shaft or axle, and magnetic poles belong to at least one of the facing sides of the first and second disk-shaped bodies which are magnetized orthogonally to the air gap boundary surface, which extend in the direction of the axle, and which alternate around the periphery,

with the first body comprising a slot-shaped return path body, which, in section transverse to the direction of movement, is very narrow, and magnetic poles which it carries on one of its sides, and the field device delimits a further air gap section in the peripheral region whose boundary surface belonging to the first body abuts each of the boundary surfaces also belonging to it of the neighboring air gap sections in each bordering edge or corner edge, and at least one air-core coil, with each coil side running at least partially through the air gap in the peripheral region and changing its geometric shape at both bordering edge or corner edges of the first body and bent or folded around the first body, extending outward from there on both sides of the first disk-shaped body in the direction of the axle or shaft, into each of the air gap sections approximately centrally between each two disk-shaped bodies at equal distances from them, and connected there with another coil side into an air-core coil, with the field device rotatable relative to at least one air-core coil and the first and second disk shaped bodies thereby moving preferably uniformly with one another.

250. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 245, characterized in that at least one first body is bent or folded around the air gap and, independent from the second body, relatively movable to at least one air gap.

251. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 245, wherein the first drum-shaped body has the shape of a hollow or full circular cylinder and the second drum-shaped body has the shape of a hollow circular cylinder, with at least one of the facing shell sides of the first and second bodies, which delimit an air gap section, containing magnetic poles which are preferably radially magnetized and alternate around the periphery, and, in section transverse to the direction of movement, at least one of the facing sides of the first and second body, on the face at least one side of the first body, which delimits an air gap section, containing magnetic poles, which are magnetized orthogonally to the air gap boundary surface and axially and which alternate around the periphery, and the corner edge is formed by the abutting boundary surfaces of the shell and face sides of the air gap section belonging to the first body, which lie orthogonal to one another, each coil side of the at least one air-core coil is bent or folded around it and it extends from there outward into the air gap section on the shell side, and in the direction of the axle or shaft in the air gap section on the face side.

252. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 245, wherein the first drum-shaped body has the shape of a hollow or full circular cylinder and the second drum-shaped body has the shape of a hollow circular cylinder, with at least one of the facing shell sides of the first and second bodies, which delimit an air gap section, containing magnetic poles which are preferably radially magnetized and alternate around the periphery, and, in section transverse to the direction of movement, at least one of the facing faces of the first and second body, which delimit an air gap section on the face on the least one side of the first body, containing magnetic poles, which are preferably magnetized orthogonally to the air gap boundary surface and which alternate around the periphery, with the air gap sections on the face, in section transverse to the direction of movement, lying obtuse angle to the air gap section on the shell side, and the boundary surfaces, belonging to the first body, of one air gap section on the shell side and one air gap section on the face, each abutting in an corner edge of the first body, around which each coil side of the at least one air-core coil is bent or folded and extends from there into the air gap section on the shell side and into the air gap sections on the face, each in the direction of the axle or shaft.

253. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 245, wherein the first drum-shaped body has the shape of a hollow or full circular cylinder and the second drum-shaped body has the shape of a hollow circular cylinder, with at least one of the facing shell sides of the first and second bodies, which delimit an air gap section, containing magnetic poles, which are preferably radially magnetized and alternate around the periphery, and the circular cylinder, in section transverse to the direction of movement, having faces bent inwards on at least one side toward the axle or shaft, with at least one of the facing faces of the first and second body, which delimits an air gap section on the face on at least one side of the first body, containing magnetic poles, which are preferably magnetized orthogonally along the bending radius and which alternate around the periphery, and at least one bordering edge or corner edge formed by the abutting boundary surfaces belonging to the first body of the air gap sections on the shell side and face, in which each coil side of the at least one air-core coil changes its geometric shape and is bent or folded around the first body during its course through the air gap and extends into the air gap section on the shell side and into at least one air gap section on the face in the

direction of the axle or shaft.

254. (New) A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 245, wherein the field device is in the form of at least three cylindrical bodies and the cylindrical body nearest the axle is a full or hollow cylinder and all further bodies are hollow cylinders and are nested in each other at a uniform interval at least on the shell side, with, in axial section, the boundary surfaces of one first body and one second body at a time delimiting one air gap section at a time, which each extend axially on the inner and outer shell surfaces of the first hollow cylinder, and at least one of the facing shell surfaces of the first and second cylindrical bodies has magnetic poles, which are preferably radially magnetized, extend axially, and alternate around the periphery, and preferably at least one of the facing faces of the first and second cylindrical bodies, which delimit an air gap section or a folded region on at least one side of the first body, also has magnetic poles, which are, extend in the direction of the axle or shaft, and alternate around the periphery, and each coil side of the at least one air-core coil is bent or folded around an short outer edge of the, in section transverse to the direction of movement, preferably relatively narrow cross-section of the hollow cylindrical first body and extends from there outward on both sides of the short outer edge of a, in the section transverse to the direction of movement, narrow cross-section of the hollow cylindrical first body, into an air gap section on the face or on one side at a time into an air gap section on the face in the direction of the axle or shaft, and on the other side into an air gap section on the shell side.

255. (New) A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 254, wherein the at least two air gap sections, in section transverse to the direction of movement, lie parallel to one another, and their inner boundary surfaces delimit a uniformly narrow first body- and
the inner boundary surfaces of the at least two air-core coil sections comprise at least predominantly return path material.

256. (New) A machine of magnetic induction with a bent air core coil between two magnetic bodies comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first

and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,

wherein the air gap, in section transverse to the direction of movement, comprises at least two neighboring uniform and/or nonuniform air gap sections, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform and their magnetic poles are magnetized preferably vertically to the boundary surface in direction of the coil side and that with one of their air gap boundary surfaces belonging to the first body lie at an angle to one another at the joint bordering edge or corner edge arising in this way, and each coil side of the at least one air-core coil runs through the air gap with its air gap sections, with each edge changing its geometric form and thereby completing a bend or fold around the first body, and each coil side running essentially in the air gap, the individual air gap section is straight or curved, and every coil stokes across both pole surface during relative moving and straight and/or arc-shaped air gap sections are combined

wherein the field device comprises at least in the form of at least two long bodies, with each one first long body located neighboring one second long body, in section transverse to the direction of movement, and these each delimiting one air gap section, with at least two straight air gap sections or at least one straight and one curved air gap section or at least one curved air gap section forming the air gap, with each coil side of the at least one air-core coil bent in its course through the air gap around at least one first body within at least one curved air gap section and/or changing its geometric shape at least one bordering edge or corner edge and/or outer edge of the long first body in which each two neighboring air gap sections abut at

their boundary surfaces, and bent or folded around the first body, and extending over the complete air gap approximately centrally between the first and second body and at approximately the same distance from each of them, and the magnetic poles, which delimit the air gap and each air gap section on at least one side, are preferably magnetized orthogonally to their air gap boundary surface, extend, in section transverse to the direction of movement, along the air gap, and alternate around the periphery, and the field device moves linearly relative to at least one air-core coil.

257. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies comprising an air gap, delimited by a field device, in the form of at least two bodies at a distance from one another, with each one first body located neighboring one second body, and with magnetic poles, belonging to at least one of the facing sides of the first and second body, which are magnetized orthogonally to the air gap, extending essentially over the entire air gap transverse to a direction of movement, each as a whole or divided into partial poles, and backed with return path material, which alternate in the direction of movement, and whose field runs essentially in a straight line inside the pole surface region of each pole from one boundary surface of the air gap to the opposite boundary surface, which either also has magnetic poles or is comprised predominantly of return path material, and at least one two-pole air-core coil or a winding with two-pole air-core coils, which have no contact to return path material, extending, in section transverse to the direction of movement, into the air gap approximately in the middle and at an equal distance from the first and second bodies, moving relative to the field device and thereby each coil side of the at least one air-core coil traversing the direction of movement, and is connected at the outer edge of the air gap with another coil side directly or via predominantly inactive conductor or winding head conductor into at least one air-core coil,
wherein the air gap, in section transverse to the direction of movement, comprises at least one curved uniform and/or nonuniform air gap section, with every uniform air gap section having boundary surfaces (to each other) which are uniform and every nonuniform air gap section having boundary surfaces (to each other) which are nonuniform, which is delimited by the inside of the first body and outside of the second body and in which at least one curved air gap section each coil side of the at least one air-core coil extends essentially along the full length of the curve, and the coil sides run through the air gap with its at least one air gap section,

wherein the field device comprises at least in the form of at least two long bodies, with each one first long body located neighboring one second long body, in section transverse to the direction of movement, and these each delimiting one air gap section, with at least two straight air gap sections or at least one straight and one curved air gap section or at least one curved air gap section forming the air gap, with each coil side of the at least one air-core coil bent in its course through the air gap around at least one first body within at least one curved air gap section and/or changing its geometric shape at least one bordering edge or corner edge and/or outer edge of the long first body in which each two neighboring air gap sections abut at their boundary surfaces, and bent or folded around the first body, and extending over the complete air gap approximately centrally between the first and second body and at approximately the same distance from each of them, and the magnetic poles, which delimit the air gap and each air gap section on at least one side, are preferably magnetized orthogonally to their air gap boundary surface, extend, in section transverse to the direction of movement, along the air gap, and alternate around the periphery, and the field device moves linearly relative to at least one air-core coil.

258. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 213,218 or 220, wherein the field device comprises at least in the form of at least two long bodies, with each one first long body located neighboring one second long body, in section transverse to the direction of movement, and these each delimiting one air gap section, with at least two straight air gap sections or at least one straight and one curved air gap section or at least one curved air gap section forming the air gap, with each coil side of the at least one air-core coil bent in its course through the air gap around at least one first body within at least one curved air gap section and/or changing its geometric shape at least one bordering edge or corner edge and/or outer edge of the long first body in which each two neighboring air gap sections abut at their boundary surfaces, and bent or folded around the first body, and extending over the complete air gap approximately centrally between the first and second body and at approximately the same distance from each of them, and the magnetic poles, which delimit the air gap and each air gap section on at least one side, are preferably magnetized orthogonally to their air gap boundary surface, extend, in section transverse to the direction of movement, along the air gap, and alternate around the periphery, and the field device moves linearly relative to at least one air-core coil.

259. (New) A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 258, wherein the long bodies are at least three long, plate-shaped bodies of a small, uniform thickness, which lie at uniform intervals from one another, with an air gap section located between each first plate-shaped body and second plate-shaped body, and the air gap sections lying parallel to one another in section transverse to the direction of movement, with the plate-shaped bodies being long relative to their width and the long sides lying in the direction of movement and magnetic poles belonging to at least one of the facing sides of the first and second plate-shaped bodies which extend transverse to the direction of movement and are magnetized orthogonally to the surface of the plate-shaped body delimiting the air gap, and the boundary surfaces belonging to the first body, which has, in section transverse to the direction of movement, a uniformly narrow surface, two neighboring air gap sections abut one another on one long side at the outer edge, around which each of the coil sides of the at least one air-core coil is bent or folded, and extends from this folded region into the air gap section, and is connected, in the region of the other opposite long edge of the first plate-shaped body, with another coil side into an air-core coil, and the at least one air-core coil moves linearly relative to the field layout.

260. (New) A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 258, wherein the first and second long bodies are connected with one another in the direction of movement at their beginning and their end by a body.

261. (New) A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 258, wherein the field device comprises at least in the form of at least two long bodies, with each one first long body located neighboring one second long body, in section transverse to the direction of movement, and these each delimiting one air gap section, with at least two straight air gap sections or at least one straight and one curved air gap section or at least one curved air gap section forming the air gap, with each coil side of the at least one air-core coil bent in its course through the air gap around at least one first body within at least one curved air gap section and/or changing its geometric shape at at least one bordering edge or corner edge and/or outer edge of the long first body in which each two neighboring air gap sections abut at their boundary surfaces, and bent or folded around the first body, and extending over the complete air gap approximately

centrally between the first and second body and at approximately the same distance from each of them, and the magnetic poles, which delimit the air gap and each air gap section on at least one side, are preferably magnetized orthogonally to their air gap boundary surface, extend, in section transverse to the direction of movement, along the air gap, and alternate around the periphery, and the field device moves linearly relative to at least one air-core coil; and at least one air-core coil is

bent or folded around a first body which, in section transverse to the direction of movement, is essentially a circle, a triangle, a rectangle, or a square, with each coil side bent around the first body or around one or more edges of the first body, forming each corner of the polygonal cross-section of the first body, and hereby running at least through one bent or two neighboring straight air gap sections.

262. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 213 or 256, wherein it is composed of several machines which use a joint second body of the field device, which is implemented as a permanent magnet body.

263. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 213, 218, 219, 223, 224, 237 or 256, wherein, in section transverse to the direction of movement, first and second bodies are securely connected directly or via a body, which is a return path, at the outer edges of the opposing boundary surfaces of the air gap, with the second body having at least one continuous slot in the direction of movement, for leading through an coil support, which divides the air gap boundary surface of the second body approximately in the middle in the direction of extension of the air gap and/or is located in a folded region of the at least one air-core coil.

264. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 213, 218, 223, 224, 256 or 257, wherein, in section transverse to the direction of movement, first and second bodies are securely connected directly or via a body, at the outer edges of the opposing boundary surfaces of the air gap, with the second body delimiting the air gap opposite to the first body and the coil support connected at the other outer edge of the air gap with a winding head or an inactive conductor region of the at least one air-core coil and led out of the air gap region.

265. **(New)** A machine of magnetic induction with a bent air core coil between two magnetic bodies according to claim 213, wherein the field device is surrounded by a housing or is itself the housing or part of the housing, and either the at least one air-core coil is securely connected with a shaft or axle, with the field device journaled directly and/or via a housing, or the at least one air-core coil is journaled directly and/or via a coil support and/or via a housing on the shaft or axle , and the field device is thereby securely connected with the shaft or axle.

Applicant respectfully submits that the new claims overcome the objections and rejections made by the Examiner and Applicant requests the Examiner to reconsider the rejections and to pass the application to issue.

Respectfully submitted,

Reg. No. 29,927

Kevin W. Guynn
SONNENSCHEIN NATH & ROSENTHAL LLP
Customer #26263
80th Floor - Sears Tower
Chicago, Illinois 60606
Telephone (312) 876-2886
Attorneys for Applicant.

SONNENSCHEIN NATH & ROSENTHAL LLP
P.O. Box #061080
Wacker Drive Station-Sears Tower
Chicago, Illinois 60606-1080
(312)876-2886

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